San Francisco Bicycle Count Report 2015

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Municipal
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Agency

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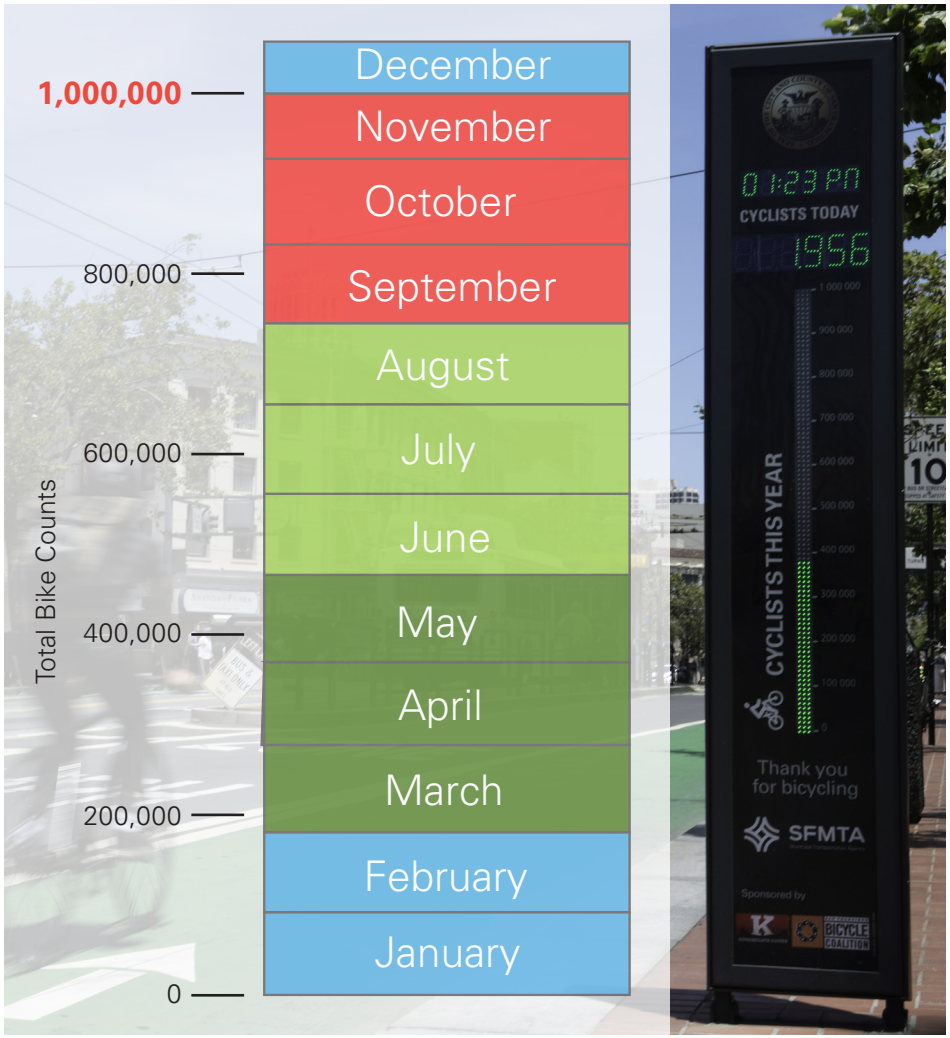
KEY FINDINGS

- 2015 was the first year San Francisco's bike counter on Market Street reached 1 million bike trips logged, representing a 25 percent increase over 2014.
    - The highest weekday bike count for the year was May 27, 2015 with 4,537 bikes counted, which is a 12 percent increase over 2014's recorded high of 4,050 bikes on August 7, 2014.
- According to the American Community Survey, bike mode share for commute trips made by San Francisco residents increased to 4.4 percent in 2014.
- The 15 automated bike counters found that weekday bike trips in San Francisco increased by 8.5 percent from 2014 to 2015.
    - More than 10,000 bikes were counted at the 15 automated counters on an average weekday.
- 85 percent of bicycle improvements made in 2010 - 2014 are located in neighborhoods that have grown to have more than the citywide 4.4 percent bicycle commute mode share.
- In 2015, October had the highest monthly bike ridership with approximately 322,000 bikes logged at the 15 locations monitored by automated bike counters.
- Morning bike commute volumes are relatively concentrated, peaking between 8 – 9 a.m., but evening bike commute volumes are more spread out without a clear peaking point.
- There are an estimated 82,000 bike trips in San Francisco per day.

Market Street Barometer 2015



*Counts account for every day of the week in 2015.

The Market St. bike counter logged more than 1 million trips in 2015, a 25% increase over 2014 and a record number since its installation in May 2013.

INTRODUCTION

Overview

Since 2006, the San Francisco Municipal Transportation Agency (SFMTA) has conducted annual bicycle counts at key intersections during the evening peak period.

This information has helped in making policy and planning decisions by illustrating where bicycle activity is highest, where there are opportunities for improvement, and how the SFMTA's programs and projects affect travel behavior.

In January 2012, the SFMTA Board of Directors approved the 2013 – 2018 SFMTA Strategic Plan, which documents the vision, mission, goals, and objectives for the agency. Tracking bicycling volumes and trends in San Francisco supports the SFMTA's Strategic Plan Goals, which build upon the city's Transit-First Policy to prioritize ways of traveling other than driving a car.

A Growing City

San Francisco has been experiencing significant population and employment growth for several years.

Understanding bicycling trends will continue to be important given projections by the Association of Bay Area Governments that San Francisco will gain over 100,000 new households and over 190,000 new jobs by 2040.

Since San Francisco has limited street space, increasing bicycle ridership, walking and transit trips is critical to accommodate growth, especially in the densest parts of the city.

Methodology

This report is unique in comparison to past reports because it draws bicycle count data from three different sources:

1. Automated bike counters at 15 locations logging bike trips 24/7, 365 in 2014 and 2015
2. Manual bike counts collected at 80 locations from 4:30 – 6:30 p.m. in September 2015
3. American Community Survey data from 2005 to 2014 by the U.S. Census Bureau

METHODOLOGY IN DETAIL

Automated Counters

At the time of this report, the SFMTA has a system of 25 automated bike counters embedded in select city corridors. Monitoring bicycle volumes 24 hours a day, the continuous data stream allows for in-depth analysis. From 2014 to 2015, several counters were under maintenance for various reasons, such as construction activity. The 2015 report analyzes data from 15 counters that have year-round data from 2014 to 2015 in order to provide the most accurate comparison.

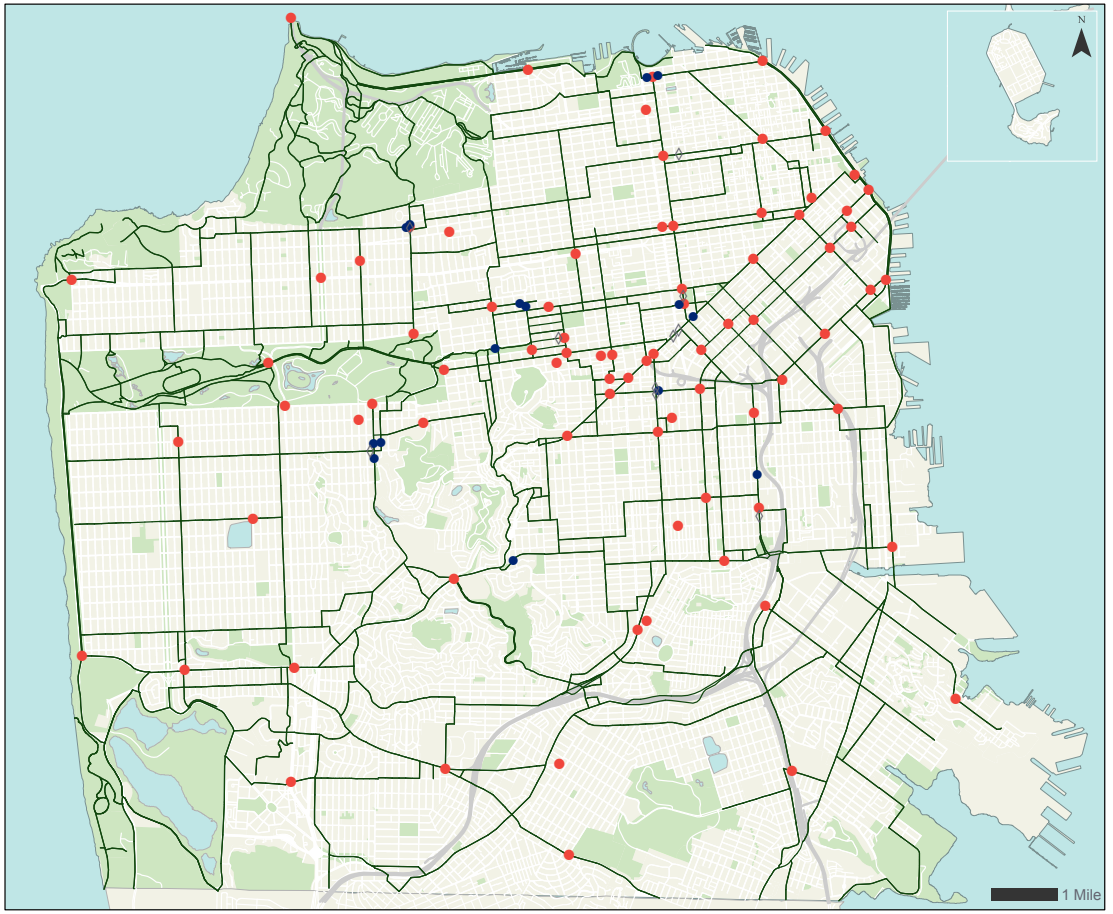
American Community Survey

The ACS is an ongoing statistical survey by the U.S. Census Bureau to provide a portrait of a community's characteristics. The 2015 report uses five-year estimates from 2005-2009 and 2010-2014 and can be used to analyze how the number of people biking to work by census tract has changed over time. Five-year estimates represent survey responses collected over a period of time to ensure a statistically significant sample size.

Manual Counts

The SFMTA has conducted manual bicycle counts annually since 2006. The 2015 report uses manual counts at the same 80 locations as the 2014 report, which are located in active bicycle corridors throughout the city. These manual counts are a sample and do not count all trips in the city. Manual counts were taken between September 14 and 20 from 4:30 p.m. – 6:30 p.m. Many cities across the U.S. conduct similar counts in September as part of the National Bicycle and Pedestrian Documentation Project.

Map of 2015 Bicycle Count Locations

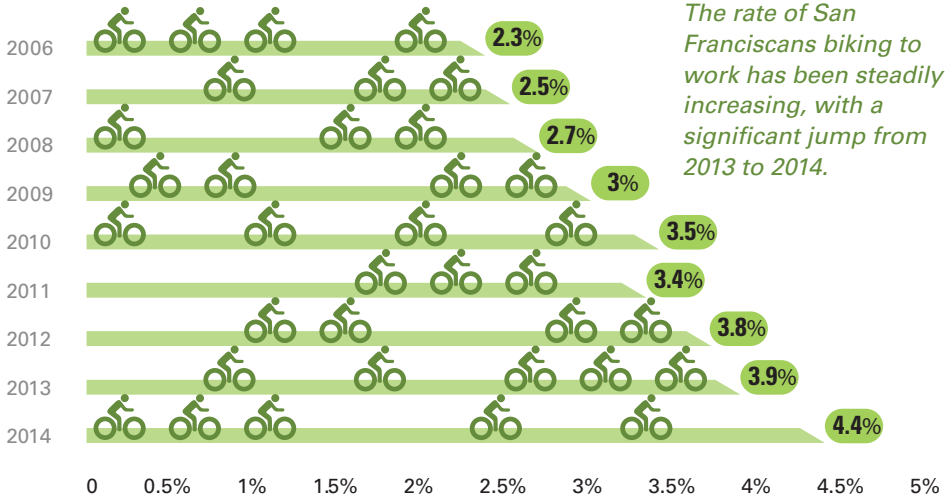


San Francisco's bike data collection locations, which will continue to grow in 2016.

HOW MANY PEOPLE ARE BIKING?

San Francisco Bicycle Commute Mode Share

According to the U.S. Census Bureau's American Community Survey, San Francisco's bike mode share for commute trips made within the city reached 4.4 percent in 2014. This represents a steady increase from 3.9 percent in 2013 and a doubling in mode share since 2006.

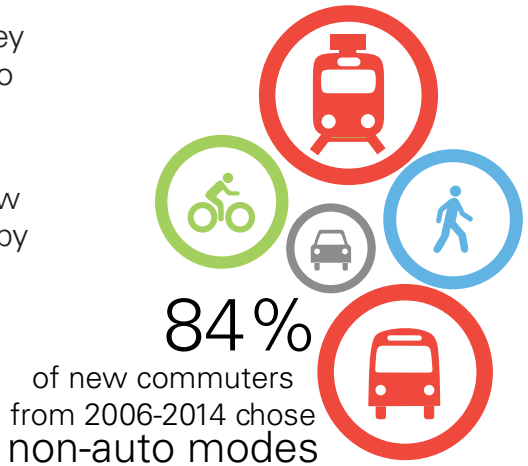


The rate of San Franciscans biking to work has been steadily increasing, with a significant jump from 2013 to 2014.

Source: American Community Survey, 1-Year Estimates

The American Community Survey also estimated that from 2006 to 2014, San Francisco gained over 86,000 new commuters.

Approximately 84 percent of new commuters chose to commute by non-auto modes, including over 12,000 new bicycle commuters (14 percent).



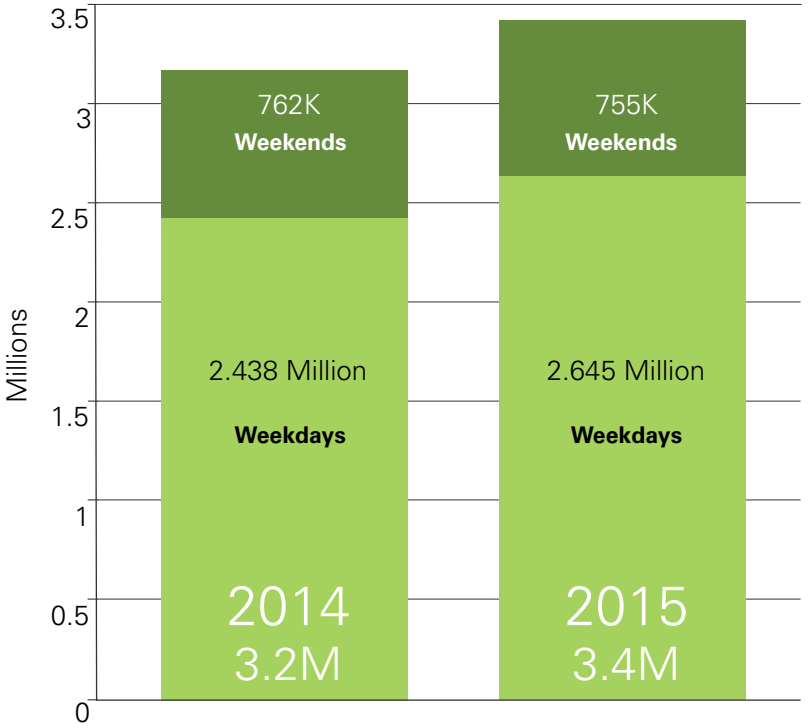
Bicycle Trips Logged by Automated Counters

San Francisco's 15 automated bike counters logged increases in bicycling as well.

While a daily comparison at the 15 locations throughout the year reported a 6.3 percent increase in bike trips, a weekday comparison highlighted an 8.5 increase.

200,000 more weekday bike trips were counted in 2015, suggesting that more people are using their bike to commute.

Automated Bicycle Counts at 15 Locations



200,000 more bike trips were logged by San Francisco's automated counters in 2015 compared to 2014.

WHERE ARE PEOPLE BIKING?

Geographical Observations

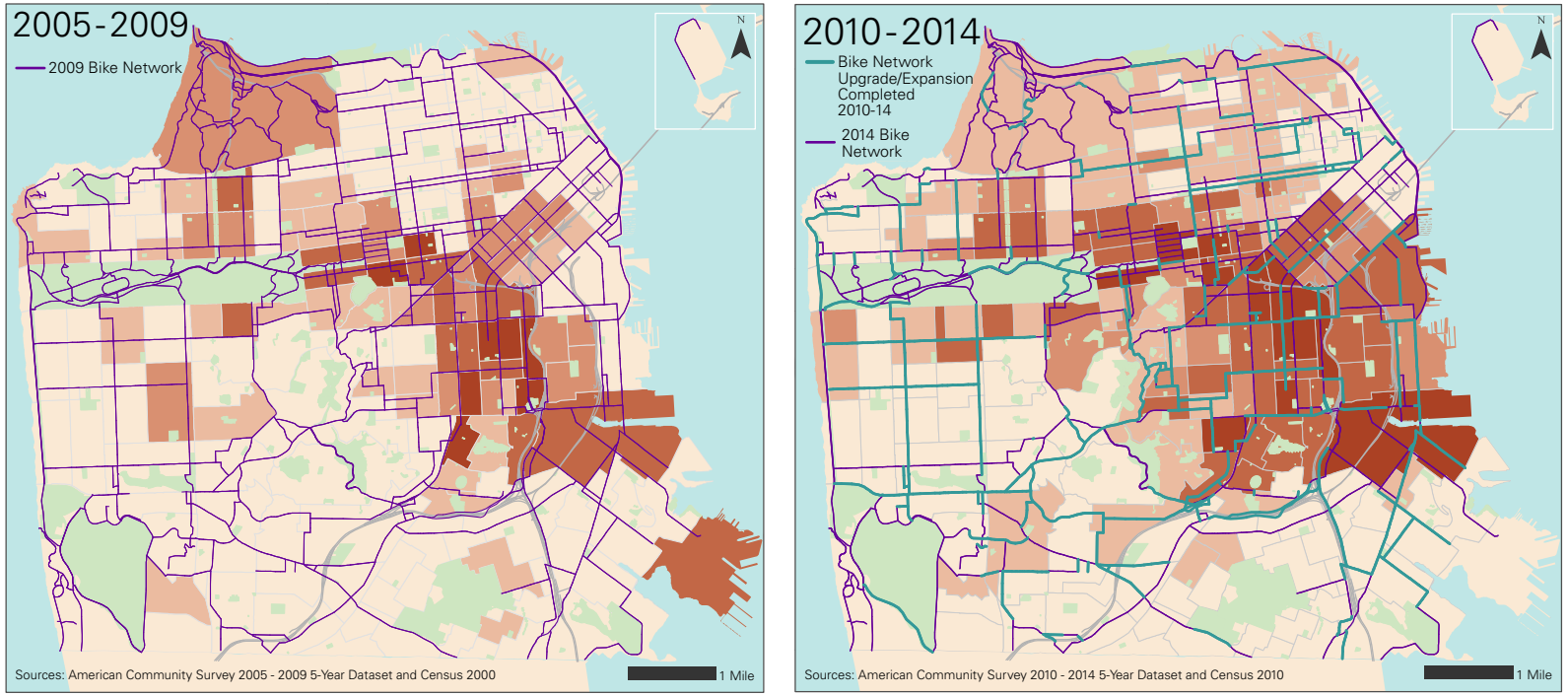
From 2010 – 2014, the SFMTA made bike improvements on 161 lane miles* of city streets, which is approximately 37 percent of San Francisco's Bike Network.

The maps below overlap the San Francisco Bike Network, bike network improvements made between 2010 – 2014, and census tract data from the American Community Survey and Census.

The majority (85 percent or 135 lane miles) of bike improvements made in that time period correspond to areas where bike mode share is now significantly greater than the citywide average of 4.4 percent. Not only has the city's central and northeast neighborhoods seen a drastic increase in bicycling, that trend is branching to the city's more residential western and southern neighborhoods as well.

While it's unclear whether the improvements encouraged people to bike or the improvements were responding to demand, there is no doubt that investments in the bicycle network have had a direct impact on ridership.

Bike Commute Mode Share 2005 – 2014



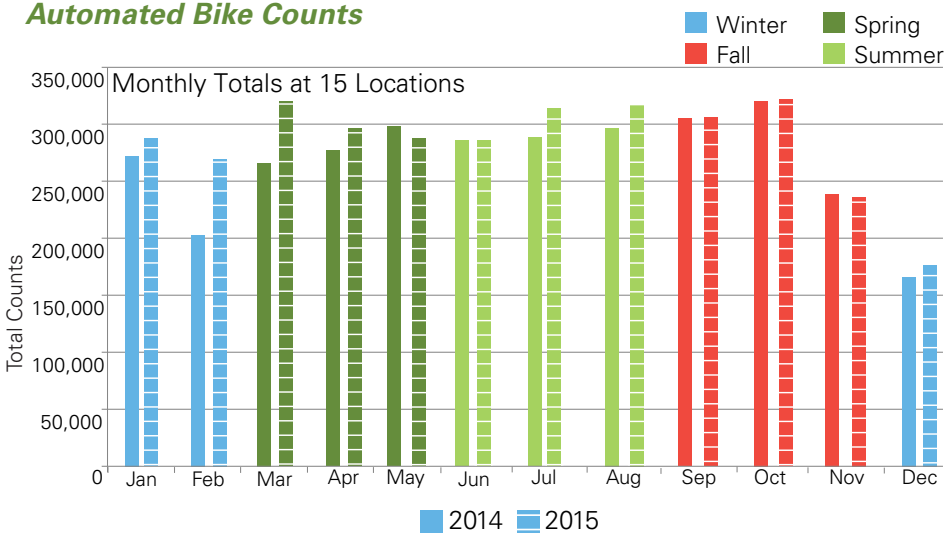
Biking has surged across the city, with many neighborhoods exceeding a 10% bike commute mode share.

*Lane miles account for both sides of the street while miles account for street mileage.

WHEN ARE PEOPLE BIKING?

Month by Month and Time of Day Results

Automated Bike Counts



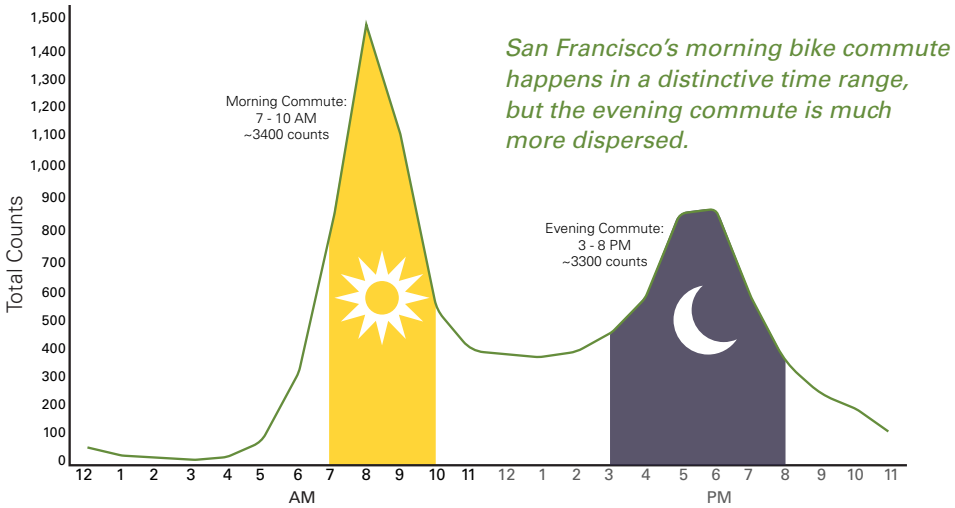
Many take advantage of San Francisco's temperate climate to bike year round, with the summer season seeing peak ridership.

The 2014 – 2015 monthly comparison graph illustrates bicycle counts logged by the 15 automated counters used for this study.

Categorizing the months by season revealed that in 2014 and 2015, the winter season (December - February) had the lowest bicycle counts, accounting for 21 percent of the year's counts, while the summer season (June - August) had the highest bicycle counts, accounting for 27 percent of the year's counts.

Bike ridership in October continues to be the highest for the year. In October 2014, the automated counters logged 320,861 bikes and that number grew to 321,803 in October 2015. October's spike in bike ridership can be partly attributed to the free weekend music festival, Hardly Strictly Bluegrass, which draws more than 750,000 people to the three-day event.

Average Weekday Bike Volumes in 2015



San Francisco's morning bike commute happens in a distinctive time range, but the evening commute is much more dispersed.

The graph on the left illustrates the distribution of bicycle counts throughout the course of an average weekday in 2015.

The morning commute volumes are relatively concentrated, peaking somewhere between 8 – 9 a.m., but the evening commute volumes are more spread out and lack a clear peaking point like the morning.

This suggests that evening commute activity is more variable and bicycle commuters may have more flexible working hours or are making multiple stops on the way home, such as attending social activities or running errands.

IN CONCLUSION

Moving To Better Data Collection

The SFMTA has continually used the best practices to count the number of bicycle trips.

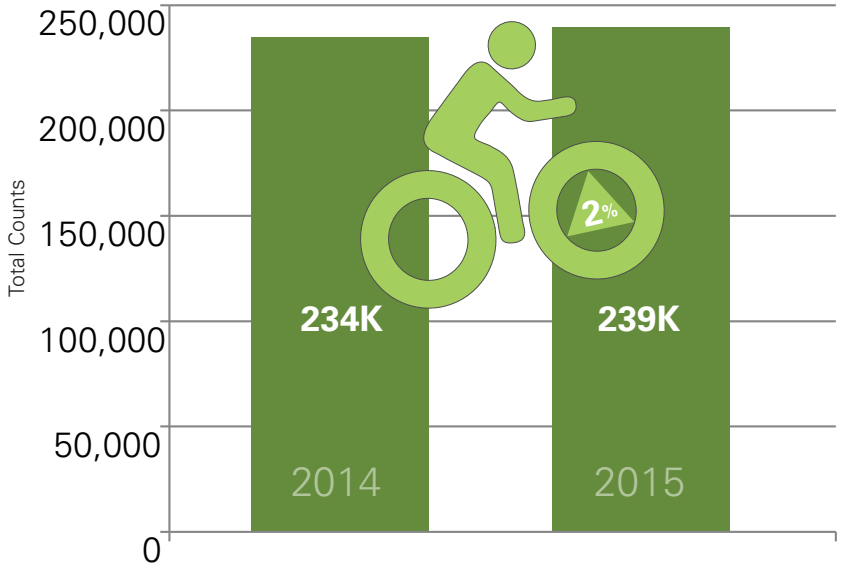
The agency has moved from staff standing on corners collecting data to automated technology. Currently, the agency uses a mixture of automated counters and video counts. While the video counts are only done for two hours during the evening, automated counters can collect continuous data.

The ability to collect data throughout the year provides a more complete picture of ridership and accounts for the variability of the data shown in the time of day and month counts in the previous page.

For example, the September 14 – 20, 2015 manual counts (taken for only two hours from 4:30 – 6:30 p.m., not capturing the full evening commute) report a seven percent decrease from the September 2014 manual counts. While the 15 automated counters also reported a similar decrease in this September 14 – 20 timeframe, automated counts for all of September weekdays showed a two percent increase from September 2014 to September 2015 (~234,000 to ~239,000).

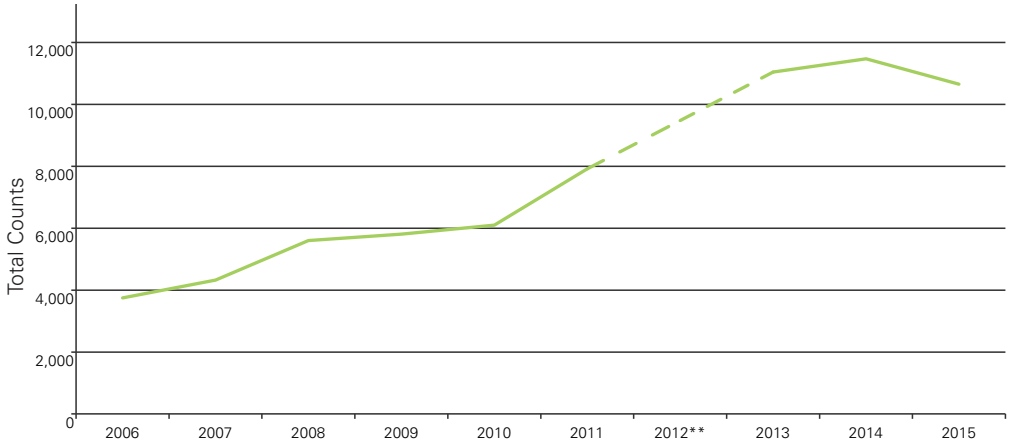
This shows the ability of automated counters to collect more robust data that eliminate problems with only sampling for a limited amount of time on a limited number of days.

Automated Bicycle Counts: September 2014 - 2015



The city's 15 automated bike counters logged a 2% biking growth in the month of September, counting trips 24/7 for the whole month...

Manual Bicycle Counts 2006 – 2015*



Source: SFMTA Manual and Video Counts
* Volumes represented are at the same 19 locations since manual counts began in 2006
** No bicycle count data was collected in 2012

while manual counts saw a 7% decrease when just analyzing two hours in the PM peak commute over only 6 days.

IN CONCLUSION

Recommendations & Next Steps

This report provides a comprehensive assessment of bicycling activity in 2015 using San Francisco's automated counters, the American Community Survey, and manual intersection counts that took place in September.

When the SFMTA began collecting annual bicycle data in 2006, intersection counts were gathered by staff over the course of several days in August and September during the evening peak period. The annual count report has evolved since it originated, from expanding the number of locations each year to leveraging new technologies and state of the art practices.

Moving forward, the SFMTA recommends:

1. **Leveraging automated bike counter data for future reports.**

The current best practice research shows that point-in-time data can result in a higher margin of error and recommends counts to be collected for a minimum of 24 hours using automated counting devices.

2. **Tripling the city's automated counter network over the next year.**

Implementing more counters citywide will help the city and public to gather and monitor bicycle trends. More robust data will be collected as well, which means more representative samples to draw from.

3. **Using the steady stream of automated count data to report more frequently.**

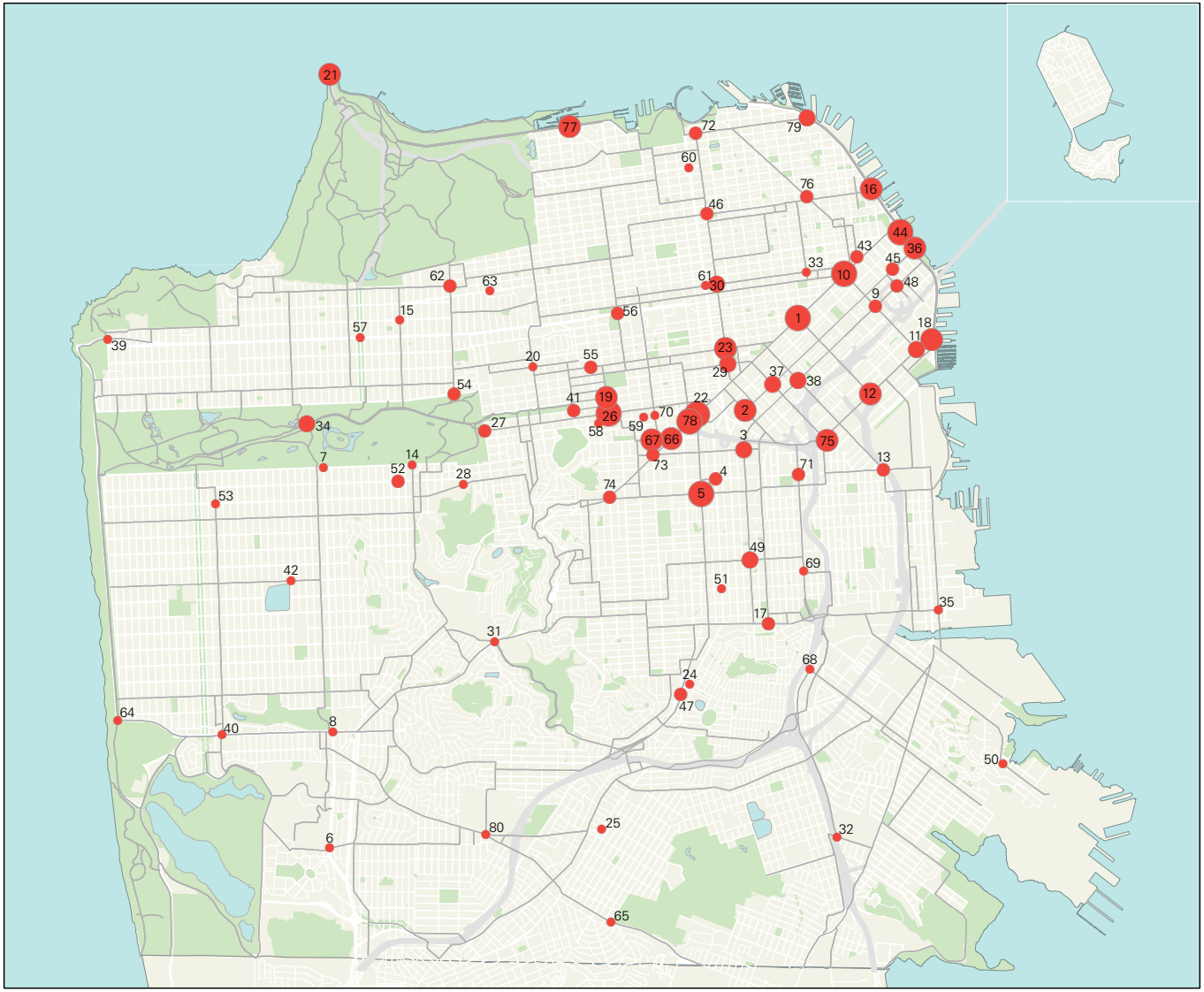
With the deployment of an expanded citywide automated counter network, the SFMTA can use robust data to report bicycle activity and trends with seasonal and time of day data. Since this technology enables data to be available on a more regular basis, the SFMTA aims to report the official bicycle trends more regularly throughout the year.

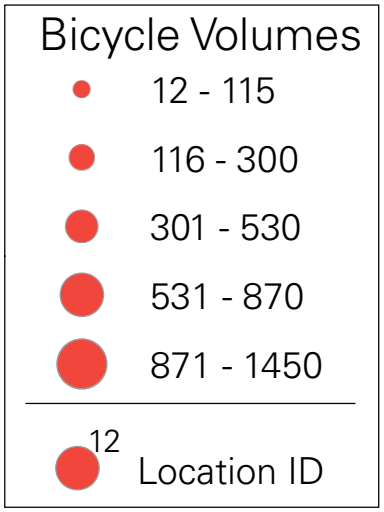
4. **Continued investments in better bikeways for the city's residents, workers and visitors.**

The American Community Survey commute data and bicycle counts suggest that bicycle activity growth has occurred near investments in bicycle infrastructure. With additional population and job growth projected, especially in the northeast and southeast quadrants of the city, it is important to continue investing in bicycle infrastructure to help encourage new residents and workers to use non-private auto modes of transportation, like bicycles.

APPENDIX A: MANUAL COUNT VOLUMES

The map below illustrates the evening peak period (4:30 p.m. - 6:30 p.m.) manual count volumes at each of the 80 locations surveyed in September 2015. Detailed counts by location for September 2014 and 2015 are located in Appendix B.





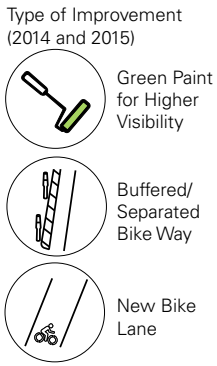
Corridors experiencing the highest bicycle activity in September 2015 include Market Street, the Embarcadero, Townsend Street, and the Wiggle.

APPENDIX B: BICYCLE COUNTS BY LOCATION

Automated Counters

The automated counts in the tables below are total yearly volumes gathered during 2014 and 2015. The table also indicates locations with bicycle improvements completed in 2014 or 2015.

Location	Improvement	2014	2015
Southbound 6th Ave at Kirkham		21.9K	24K
Northbound 7th Ave at Kirkham		50.3K	52.1K
Southbound 7th Ave at Kirkham		47.7K	47.6K
Westbound 14th St at Julian		261.9K	252.7K
Northbound Arguello at Lake		132.3K	132.9K
Southbound Arguello at Lake		83.2K	88.7K
Baker at Golden Gate		37K	32.7K
Eastbound Broadway Tunnel		28.8K	23.6K*
Clipper at Clipper Terrace		7.2K	7.6K
Fell at Scott		559K	402.6K*
Golden Gate at Baker		64.6K	68K
Eastbound Grove at Polk		127.1K	121.8K
Eastbound Kirkham at 7th Ave		Under Maintenance	
Lake at Arguello		70.3K	72.3K
Market Street Barometer		850.2K	1.1M
Eastbound Market at Van Ness		719.6K	608.2K*



Location	Improvement	2014	2015
Westbound Market at Van Ness		Under Maintenance	
Eastbound North Point at Polk		110.1K	114.9K
Westbound North Point at Polk		81.7K	89.5K
Panhandle Bike Path at Masonic		1.3M	1.3M
Southbound Polk at Grove		231.6K	256.2K
Northbound Potrero at 23rd St		Under Maintenance	
Southbound Potrero at 21st St		53K	46K
Northbound Valencia at 14th St		290K*	212.2K*
Southbound Valencia at 14th St		242.1K*	176.6K*

*Location is missing some counts due to construction.

Manual Counts

The manual counts in the tables below are evening commute volumes collected in September 2015 using video technology.

The table also indicates locations with bicycle improvements completed in 2014 or 2015.

ID	Northwest Locations	Improvement	2014	2015
15	8th + Clement		91	50
19	Fell + Scott		810	589
21	Golden Gate Bridge		547	652
20	Golden Gate + Masonic		82	79
77	Marina + Cervantes		635	580
26	Page + Scott		1216	1055
27	Page + Stanyan		170	166
34	JFK + Transverse Drive		420	378
41	Oak + Baker		185	194
39	Point Lobos + 48th Ave		51	20
55	Divisadero + McAllister		289	213
58	Divisadero + Haight		84	75

ID	Northwest Locations	Improvement	2014	2015
59	Fillmore + Haight		78	81
70	Webster + Haight		54	57
62	Arguello + Lake		160	187
57	Park Presidio + Geary		15	38
54	Arguello + Fulton		163	157
63	Spruce + California		24	33

Manual Counts continued

ID	Northeast Locations	Improvement	2014	2015
9	2nd St + Folsom		307	299
10	2nd St + Market		1086	982
11	2nd + Townsend		486	485
1	5th St + Market		1495	1449
12	5th St + Townsend		818	805
2	11th St + Howard		661	596
76	Columbus + Grant + Broadway		107	188
16	Embarcadero + Broadway		702	679
22	Valencia + Market		1281	1259
23	Polk + McAllister		725	668
29	Polk + Grove		522	421
30	Polk + Sutter		438	446
33	Stockton + Sutter		150	108

ID	Northeast Locations	Improvement	2014	2015
18	Embarcadero + Townsend		717	653
16	Embarcadero + Broadway		678	679
45	Beale + Howard		272	222
78	Octavia + Market		911	978
38	7th St + Folsom		518	508
37	8th St + Howard		697	493
43	Battery + Bush		247	209
36	Embarcadero + Howard		871	822
72	Polk + North Point		267	268
60	Van Ness + Lombard		21	24
46	Polk + Broadway		249	271
61	Van Ness + Sutter		96	91
48	Fremont + Folsom		109	127
56	Pedestrian Bridge + Steiner St + Geary Blvd		98	139

Manual Counts continued

ID	Southeast Locations	Improvement	2014	2015
13	7th St + 16th St		279	218
75	8th St + Division + Townsend		631	649
3	Folsom + 14th St		489	460
4	Mission + 16th St		167	167
5	Valencia + 17th St		1298	1219
17	Harrison + Cesar Chavez		173	175
24	Mission + Cortland		101	55
32	Bayshore + Paul		26	16
35	Illinois + Cesar Chavez		108	105
71	Potrero + 16th St		205	176
68	Bayshore + Oakdale		63	61
69	Potrero + 23rd St		162	106
50	Hunters Point + Innes		6	14
47	San Jose + Randall		188	197
49	Folsom + 22nd St		292	365
51	Mission + 24th St		144	115

Cesar Chavez Avenue

Manual Counts continued

ID	Southwest Locations	Improvement	2014	2015
6	19th Ave + Holloway		84	54
7	19th Ave + Lincoln		48	23
8	19th Ave + Sloat		48	12
25	Mission + Ocean		35	24
14	7th Ave + Lincoln		53	28
73	Market + Church + 14th St		340	288
28	UCSF Crosswalk + Parnassus		29	21
31	O'Shaughnessy + Portola		50	14
42	24th Ave + Ortega		11	12
40	34th Ave + Sloat		41	12
67	Church St + Duboce		816	772
66	Buchanan + Market + Duboce		957	870
64	Great Hwy + Sloat		57	62
80	Phelan + Geneva + Ocean		64	85

ID	Southwest Locations	Improvement	2014	2015
53	34th Ave + Judah		22	21
52	9th Ave + Irving		150	177
65	Moscow + South Hill + Geneva		20	53

Buchanan, Market, and Duboce

Sloat Boulevard

ACKNOWLEDGMENTS

The San Francisco Municipal Transportation Agency (SFMTA) 2015 Bicycle Count Report was developed by the Planning Group in the Sustainable Streets Division.

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